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A STUDY OF TEACHER BEHAVIOR IN RELATION TO CHILDREN DIFFERING IN ANXIETY LEVEL.

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THE TWO MAJOR PURPOSES OF THE STUDY WERE (1) TO DETERMINE THE RELATION OF ANXIETY ABOUT SCHOOL TO A WIDE VARIETY OF PERSONALITY AND BEHAVIOR VARIABLES MEASURED IN THE CLASSROOM AND (2) TO EXPLORE THE EFFECTS OF DIFFERENCES IN A CLASSROOM ATHOSPHERE UPON THOSE RELATIONS. THE TEST ANXIETY SCALE FOR CHILDREN (TASC) AND THE DEFENSIVENESS SCALE FOR CHILDREN (DSC) WERE THE TECHNIQUES UTILIZED TO GET CERTAIN SELF-ATTITUDES. ALL THE CHILDREN OF THREE SECOND-GRADE CLASSROOMS IN THE SAME ELEMENTARY SCHOOL WERE THE SUBJECTS. THEY WERE ADMINISTERED THE TASC, DSC, AND LORGE-THORNDIKE TESTS AFTER THE FIRST GRADE AND OBSERVED BY TWO DIFFERENT OBSERVERS OVER A 4-MONTH PERIOD IN THE SECOND GRADE, AND RATED ON A PERSONALITY BEHAVIOR CHECKLIST. THE SAME CHILDREN WERE STUDIED IN THE THIRD GRADE TO DETERMINE THE CONSISTENCY OF THE FINDINGS AND THE EFFECTIVENESS OF THE TASC AND DSC AS RELATIVELY LONG-RANGE PREDICTIONS. ALSO, THE THIRD-GRADE TEACHERS RATED THE PUPILS ON THE PERSONALITY AND BEHAVIOR CHECKLIST. THE MAJOR FINDINGS WERE--(1) THE DSC IS A BETTER PREDICTOR THAN THE TASC OF CHILDREN'S PERSONALITY AND BEHAVIOR IN THE CLASSROOM, (2) THE DSC PREDICTS BETTER FOR GIRLS, TASC FOR BOYS. DSC IS A MORE STABLE MEASURE REGARDLESS OF CHANGE IN TEACHERS, AND (3) TEACHER-OBSERVER AGREEMENT ABOUT CLASSROOM BEHAVIOR TENDS TO BE HIGHEST FOR THOSE TEACHERS INDEPENDENTLY RATED AS MOST EFFECTIVE. IN GENERAL, TEACHERS' VALUES AND BELIEFS AFFECT THEIR OWN AND THEIR PUPILS' CLASSROOM EFFORTS, AND IN PARTICULAR THESE AFFECT CHILDREN'S ANXIETY AND DEFENSIVENESS, AND BOYS AND GIRLS DIFFERENTLY. (GC)

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A STUDY OF TEACHER BEHAVIOR IN RELATION TO CHILDREN DIFFERING IN ANXIETY LEVEL

Cooperative Research Project No. 624

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In a previous publication (1) we reported the findings of a classroom observation study in three second grade rooms of a North Haven, Connecticut elementary school. The purposes of that study were to determine the relationship of anxiety about school to a series of personality and behavior variables measured in the classroom and to explore the effects of differences in classroom atmosphere upon those relationships. The Test Anxiety Scale for Children (TASC) was used to measure the children's anxiety about school. Their freedom to communicate feelings to others was assessed with the Defensiveness Scale for Children (DSC).

Analyses of the data obtained in that study revealed consistent differences among three teachers. They differed in how favorably their teaching methods were rated and, directly related to those differences, was the degree of agreement between the teachers and independent observers in rating their pupils on a personality check list, as well as the degree to which the children's TASC or DSC correlated with teachers' and observers' checklist ratings.

Consistently different results were found for boys as compared with girls, in that agreement in checklist ratings by teachers and observers was significantly greater for the boys. The TASC but not the DSC was an effective predicator for the boys, while the DSC predicted much more effectively for the girls than the TASC.

In the present study, the children studied in the second grade were followed in a classroom observation study in the third grade to determine the consistency of findings in the previous year, and the effectiveness of the TASC and the DSC as relatively long range predictors. Thus a focus of the study remained the effect of teacher behavior from the relationship

of anxiety and defensiveness to a variety of personality and behavioral variables measured in the classroom.

Procedure

The procedure for observing the third grade rooms paralleled that of the previous year. In the first year of the study (when the children were in the second grade) two observers were used to assess reliabilities of observations and ratings. In both respects the observers agreed sufficiently to warrant use of only one observer in the second year of observations. Thus one observer spent the first five months of that school year observing full morning or full afternoon sessions in each of the four third grade classrooms and took notes on all the children in the room.

During the sixth month, each teacher rated all of her own pupils on a 10-point scale on each of the 25 items of the personality check list used the previous year. At the same time the observer rated all the children in each classroom on the same check list. In all the analyses of these ratings only those children are included for whom all data are available--including TASC and DSC scores obtained at the end of first grade and observers' and teachers' ratings for both the second and third grade. Thus there was a total of 68 children, 32 boys and 36 girls in the sample. The class sizes for the three second grade rooms varied from 19 to 25 and for the four third grade rooms from 15 to 20. Lorge-Thorndike IQ's were obtained for each subject in each year, and Metropolitan Achievement Test scores were obtained at the middle and end of the second grade and at the end of the third grade for all of these subjects.

Results

There were four main analyses of the data obtained in this study of the effect of teacher behavior upon children's behavior in the classroom. The first analysis was concerned with the degree of agreement or reliability between the observers' and teachers' check list ratings. In the second, the relationship between children's TASC scores and ratings of their personality and behavioral characteristics was studied. The third analysis focused upon the relationship of children's DSC scores and the same ratings. The last analysis compared the teachers with respect to their effectiveness in the classroom in handling various problems, both academic and emotional.

Observer-Teacher Agreement

In the reliability analyses (1) in the first year, when two observers rated all of the children in the second grade, the level of agreement for eighteen of the twenty-five items was at least .40 when computed separately for boys, girls, and all the children. These eighteen items were used in all subsequent analyses, and the other seven were excluded.[1]

In the second year of the study only one observer was used but the levels of teacher-observer agreement for the check list items separately and combined are very similar to those of the prior year. In both cases reliability is significantly higher for boys than for girls and the ranges of reliabilities for the separate classrooms within each grade are similar. With respect to the latter finding, in both years teacher-observer agreement in rating the children in a class was relatively low in the case of classrooms where the children's behavior was constricted as a result of teacher controls. That constriction of behavior occurred is suggested by the fact

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[1] For purposes of brevity, the results of the reliability analyses are not presented. The results, similar to those already reported (1), can be obtained from Dr. Davidson, Wayne State University.

that the standard deviations of the teachers' and observers' ratings for the separate items were significantly lower when teachers suppressed children's expression. The observer had demonstrated an ability to give a wide spread of ratings in other classrooms where the teachers were less controlling. Even brief observations in either year revealed in those rooms the higher degree of teacher control and the reduced variation in children's behavior and expression.

Regarding the reliability of ratings of children on the check list of personality and behavioral variables, the following patterns seem clear. First, generally the results were similar in the two years, although the observers and teachers were different. Second, in both years boys, more expressive than girls, were rated with greater teacher-observer agreement than were girls. Third, teacher-observer agreement varied in the two years with the degree of agreement tending to be related to the amount of free behavioral expression on the part of the children. The latter appears related to the degree of teacher control and may be related in some respects to the children's intellectual effectiveness.

Test Anxiety and Checklist Ratings

In this analysis, children's TA scores were correlated with the observer's ratings and with the teacher's ratings for each of the 18 items included in the study. For each classroom, in order to assess the teacher effects upon this phase of the study, children's original TA scores were correlated with ratings made in each year of the study. The results for the children in their second grade groupings are presented in Table 1. In this table one teacher's ratings were used for the grade 2 correlations

and all four third grade teachers' ratings were used to compute the grade 3 correlations, since the children of any one of the second grade classrooms were scattered through all four third grade classes in the second year of the study. The results using the ratings obtained in second and third grade for the third grade groupings are presented in Table 2. In this table, the grade 3 correlations refer to children grouped in a given classroom, who were scattered through the three second grade classrooms the previous year. The results for boys and girls separately and combined for the two years are shown in Table 3.

The outstanding feature of these results is the lack of stability of correlations between TA scores obtained at the end of first grade and ratings made in the second and third grades. In all three tables there are 51 significant correlations for the second grade, and in only 10 instanced did the relationship hold at a significant level in the third grade. Of those ten instances five occur in the analysis for boys in Table 3. For girls and for all the children, all but one significant correlation disappeared by the third grade. What stable predictive value the TASC has, then, tends to occur in the case of boys. For rooms 1, 3, and 6, there was little or no correlation between TA and check list ratings in either year of the study. In rooms 4 and 5 a number of significant correlations appeared after being absent or negligible in grade two. In room 2 significant findings were diminished and occurred on different items in the subsequent year. For room 7, no significant findings remained although eleven significant correlations were found for those children when they were in three different rooms in the second grade. These varying patterns suggest that the predictive value of TA scores is

very much a function of such variables as teacher differences or peer group changes, however those may operate. That is, the predictive value of TA scores diminishes some generally and is unstable, but for some teacher or groupings predictive value may increase and some teachers may relate with children in ways that make their original anxiety scores meaningless.

The only notable degree of stability of TASC predictive value is found for boys, a pattern reflecting generally more frequent significant results with this scale for boys as compared with girls. Generally speaking, these findings add a full measure of support for the previous view that the TASC is a much more meaningful measure for boys than girls even though girls' TASC scores are more variable and, on the average, higher than boys' (3).

Defensiveness and Checklist Ratings

Following the identical procedure used in the TASC--checklist ratings analysis, the children's original scores on the DSC, administered with the TASC at the end of first grade, were correlated with checklist ratings of them by their teachers and the observers. The results for the second grade groupings are presented in Table 4, for the third grade grouping in Table 5, and for the boys, girls, and all the children as groups in Table 6.

By comparison with the findings for the TASC the DSC is a very stable predictor of children's personality and behavior in the classroom. Of 67 significant correlations for the second grade in these three tables, 37 were matched with significant correlations when the third grade ratings were used. Moreover, the thirty-seven instances are distributed fairly evenly over all seven clasrooms as well as for girls and for children.

While the patterns of results differ markedly across the seven classrooms, within each classroom the results are very similar in both frequency and pattern for the two years. It is only for boys that consistency of findings is not the rule, although the DSC predicted with only limited effectiveness even in the second grade.

These findings suggest that compared with the TASC, the DSC is a far more stable measure and tends to retain its predictive value regardless of changes in teachers. It is also true that it is a more stable and meaningful predictor for girls than for boys. This pair of results could be interpreted to mean that girls are more stable in their personality and behavioral qualities than boys or that defensiveness is a more fundamental, and therefore more stable, characteristic than anxiety. It is also possible that both alternatives are operating in the classroom situation.

Teacher Effectiveness

To assess teacher effectiveness in handling various aspects of the learning tasks and emotional problems, the observers independently culled examples from their notes for each teacher for each of the seven categories of teacher behavior. For each incident or note, two clinicians independently indicated by favorable (+) or unfavorable (-) ratings whether the teachers' methods had helped the children or interfered with the children's effectiveness. Some notes were rated favorable with some unfavorable tinge (+-) or as having a more unfavorable than favorable tinge (-+), while others were given ?'s when both qualities were equal. For the three second grade teachers the clinicians agreed completely on 620 or 70% of their 892 ratings, while disagreeing completely on less than 4% of the ratings. On

745 or 84% of their ratings they agreed about the favorable or unfavorable direction of the rating. For the four third grade teachers, they agreed completely on 618 or 72% of their 889 ratings, while disagreeing completely less than 4% of the time. On 755 or 85% of these they agreed about direction.[2]

With this extensive agreement, the two clinicians held conferences to arrive at a single rating for those notes on which they disagreed. Thus, for each note there was one rating on which the judges were in agreement. The frequencies of favorable (+ and +-) and unfavorable (- and -+) ratings for each variable for each teacher are given in Table 7.

Two teachers, those in classrooms two and four, clearly use teaching methods rated favorable by the clinicians. They see teachers 3 and 7 as using both effective and ineffective techniques about equally, and they regard the method of teachers 1, 5, and 6 as essentially ineffective if not actually damaging to their pupils.

Collating these differences with the earlier findings, the following patterns emerge. First, teacher-observer agreement, on the average, tends to be highest for the most effective teachers, next highest for the average teachers and lowest for the teachers whose methods were evaluated as least favorable. This trend is not unexpected since teachers, in order to function in ways that help rather than interfere with children's efforts to learn, would themselves be assisted by accurate meaningful perceptions of children's behavior and personality characteristics. The position that such accurate perception does not ensure effective teaching behavior is supported by the results in the case of teacher 6, whose ratings of the children were in close accord with the observer's ratings but whose

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[2] The authors express their appreciation for the assistance generously given by Dr. Wayne Owen in this phase of the study.

teaching methods and techniques of handling children's needs were rated among the least effective.

Second, for the two effective teachers the children's TASC scores correlate significantly with ratings by the teachers and the observers for more different variables than the other five teachers for whose classes few significant results are found. In fact teacher 7 inherited a class whose ratings on eleven variables correlated significantly with TA scores the previous year. After a half a year in her room, all eleven relationships have disappeared. This teacher, sensitive and very anxious, would at times punish, at others anxiously seek to provide comfort and support, and frequently became highly emotional when the class or an individual became uncontrolled. In contrast the only teacher rated as ineffective for whose class TA scores yielded many significant results, teacher 5, was cooly efficient and prone to derogatory reactions when pupils were ineffective.

Contrasting these two teachers, the different pattern of results in the TASC-checklist analysis appears to reflect differing anxiety reactions by the two groups of children. In the case of teacher 7, the whole class tended to be unsure about what reaction to expect so that they all behaved in ways that depended upon her mood. As a result, the TA scores of these children lost what meaning they had previously. The derogation of teacher 5 tended to heighten the effects of anxiety in those already anxious thus increasing the significant results for this analysis.

The two effective teachers also emphasized the importance of learning for the children themselves and created classroom atmospheres in which the children's focus was on school work, but (in contrast to teacher 5) without

concern about derogation from the teacher. These children generally responded with increased motivation and academic involvement. The relatively greater number of significant correlations between these children's TA scores and checklist ratings appears to reflect the heightened concern of all and especially the HA children to do well. In other words, they were concerned about being effective and developing academically but not about rejection or disapproval by the teacher or about trying to predict how the teacher would react. That is, the HA bring a concern about derogation to the classroom, and when the teacher creates this issue for all children the predictive value of anxiety may be increased some if it is directed at learning but removed if the focus of anxiety is on trying to understand and predict the teacher's mood and reactions.

Compared with the TASC, the DSC-checklist analysis yields notably more stable results across teachers generally and with respect to teacher effectiveness specifically. In the case of teacher 6, the results were totally nonsignificant both years, just as in the TASC analysis, suggesting that her failure to follow up threats and hence making meaningless verbalizations to the children made differences in children's defensiveness mean as little as their differences in anxiety in terms of the relations of these scores to other variables. Only for teacher 3 did many significant results for the DSC in the second grade disappear when the children were studied in their third grade classes. Finding teachers in the third grade who did not make affection a primary issue for the children, these pupils behaved so that their DSC scores lost a considerable part of their earlier meaning.

One other finding emerged for teacher 2, the most effective of the second grade teachers. In the second year of the study, her classroom was also observed and TASC, DSC, IQ achievement test scores were obtained for all the children in that class. Both the observer and the teacher rated the children on the checklist items. The comparison of the DSC-checklist analysis for the two consecutive second grade classes of teacher 2 shows many more results for the first year class, generally more heterogeneous and brighter, than for the second year group which was more homogeneously grouped at the lower half of the intelligence distribution. With the first group, this teacher put the need to learn in the conscious focus of the children's efforts but without derogation or withholding assistance. For the slower class she did less to develop independent learning and motivated based on children's conscious awareness of the importance of learning but attempted to provide the fullest support and assistance that was the need of these children. In this instance children who learn slowly, often defensive about their own efforts, were free to ask for help though their need to be defensive was also reduced by this teacher's quiet assistance and support given freely to all individually or as a group.

Discussion

Before discussing the implications of the findings, it should be noted that neither those findings nor the measures involved relate in significant ways (or even clear patterns approaching significance) to measures of the children's intelligence or school achievement or changes in those two measures over the two school years, or for that matter, to changes in

the children's TASC or DSC scores over the same time span. Two characteristics of the sample of children in this study may have contributed to the absence of relationships. The pupil population of this school is relatively homogeneous with respect to both intelligence and social class. With very few exceptions the IQ's in this sample fall between 95 and 115 and the children come nearly exclusively from working class homes. This restriction of range on two important dimensions could reduce the predictive value of intelligence and achievement test scores. Further, the school practices a moderated form of homogeneous class grouping which could have accentuated the effects of those restricted ranges.

That is not to say that differences in intelligence or achievement are not prime determinants of or variables dependent upon teacher or child behavior or effectiveness. The results do not present any clear picture with respect to those measures very possibly because of complex interactions between them. In fact teachers do react differently to children with varying potential and actual effectiveness, and it is probable that they should. It should also be clear that, in their varying reactions, teachers can be effective or interfere with children's efforts to learn. Further, intelligence tests and achievement tests may well be misleading or have dubious value for measuring what children's potential or actual learning might be if their academic experiences were radically different.

Reviewing the major analyses already discussed, significant results differed in these three major respects: for the TASC in contrast to the DSC, for boys compared with girls, and for the individual teachers in ways that reflected their classroom effectiveness.

The first result suggests that defensiveness is a more fundamental variable, having a more stable predictive effectiveness than anxiety. Differences in teacher behavior, changes to different teachers by promotion, and the passage of time with maturational and experiential changes reduces or changes the predictive value of this measure relatively little in contrast to the effects on the correlative meaning of the TASC measure.

However, this interpretation has to be qualified in view of the second major determinant, namely the effect of sex differences. That is, the TASC yields, in both years, more significant results for boys than for girls while the reverse is true for the DSC. These first two patterns of results could well suggest that boys are changing their personality and behavioral organizations more rapidly during second and third grade than girls and that anxiety loses its earlier meaning for boys in ways that defensiveness does not for girls. In fact the present study and previous findings strongly suggest that anxiety, at least as measured by the TASC, may be an ego-alien feeling for boys and ego-syntonic for girls with just the reverse being the case for the DSC. In that view an ego-alien feeling would be more predictive of difference on other dimensions. If teachers tend to behave in ways that focus anxiety not on the child's efforts to learn but on teacher variables such as giving or withholding affection or punishment or inconsistency of reaction, boys may come to regard their anxiety as helpful warning signals and ego-syntonic. The same teacher behaviors might reinforce previously existing differences in girls' tendencies to organize their behaviors around defensiveness. This might be particularly true in view of girls' tendencies to act out their feelings less than boys do and as a result to need to verbalize their feelings more than boys (2).

For the third major source of differences, what emerges is that effective teachers tend to perceive their pulis' behavior more accurately and to draw more meaningful inferences from those observations. More important, they follow those perceptions and inferences with actions directed relevantly at the children's needs in ways that do not derogate or elicit self-derogation from their pupils but still maintain the focus on learning as the primary goal. In effect these teachers organize their efforts around a high regard for children's need to learn with freedom to explore and express themselves without concern about the teacher's being derogatory of their efforts, punitive or affectionate or being inconsistent in ways that require the child to expend much effort in predicting or understanding the teacher's moods and reactions or permits them to ignore the teacher's verbalizations as meaningless for them.

The fact that the TASC especially but also the DSC analyses yield different results for different teachers and in ways that relate to teacher effectiveness suggests the possibility that with ineffective teachers boys may feel they should conceal their anxiety or its effects. This raises the distinct possibility that the less effective teachers handle boys and girls differently so that measures of what are actually fundamental personality variables, anxiety and defensiveness, yield differential predictive values. This view would not necessarily require that the teacher stereotypically favor girls, for differentially favoring boys might well have the same effect.

Although much of this discussion is necessarily speculative, the results do point clearly to different personality dynamics for boys and girls in the classroom, to differences in predictive value of the two

measures of anxiety and defensiveness, both for boys and girls differentially and for different teachers, and to differences in teacher effectiveness which seem organized around the teachers' values and beliefs. All these suggest the need for intensive study of the meaning and effects of teacher beliefs and values as these affect their own and their pupils' classroom efforts, perhaps in particular as these affect children's anxiety and defensiveness, and boys and girls differentially.

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Table 1

Significant Mean Correlations Between Subjects'

TASC Scores and Ratings by Observers and Teachers

	2nd Grade Groupings[1]					
	Room 1 N = 24		Room 2 N = 19		Room 3 N = 25	
Variable[2]	Grade 2	Grade 3	Grade 2	Grade 3	Grade 2	Grade 3
1. Independent						
2. Hides emotions				.37*	.25*	
3. Difficulty in communicating				.43*		
4. Submissive	-.28*		.49**	.38*		-.33*
5. Cautious			.43**	.44*		
6. Not sensitive			.30*			
7. Unambitious			.31*			
8. Not well liked						
9. Immature						
10. Does not daydream			.36*			
11. Inactive						-.31*
12. Underachievers				-.36*		
13. Learns quickly					-.25*	
14. Forgets			-.29*			
15. Does not pay attention			-.49**			
16. Weak conscience			-.59**			
17. Masculine			-.38**	-.42*		.32*
18. Not responsible			-.43**			

Note - The mean correlations for Grade 2 - 1960 were obtained in z-transformations from three correlations and for Grade 3 and Grade 2 - 1961 from two correlations. The means tested for significance with a two-tail and the formula, $t_z = M_z \sqrt{n(N-3)}$, with df = n(N-3), where n is the number of correlations used to compute the means.

[1] The children in a given second grade room were scattered through the four third grade rooms and these results were obtained for the second grade groupings in both years.

[2] Positive correlations mean that anxiety is directly related to the variables as listed, while for negative correlations anxiety is inversely related to the listed variables.

* p <.05.
** p <.01.

Table 2

Significant MeanCorrelations Between Subjects'

TASC Scores and Ratings by Observers and Teachers

3rd Grade Groupings[1]

Variable[2]	Room 4 N = 15		Room 5 N = 17		Room 6 N = 20		Room 7 N = 16	
	Grade 2	Grade 3	Grade 2	Grade 3	Grade 2	Grade 3	Grade 2	Grade 3
1. Independent							.33*	
2. Hides emotions								
3. Difficulty in communication								
4. Submissive		-.37*					.48**	
5. Cautious							.43**	
6. Not sensitive		-.37*					-.32*	
7. Unambitious			-.32*	-.37*			-.39*	
8. Not well liked		.37*					-.32*	
9. Immature								
10. Does not daydream								
11. Inactive							-.38*	
12. Underachievers				-.37*				
13. Learns quickly	-.45*							
14. Forgets	.47*			-.38*				
15. Does not pay attention				-.43*			-.49**	
16. Weak conscience				-.56**			-.55**	
17. Masculine			-.37*				-.44**	
18. Not responsible				-.57**			-.45**	

Note - The mean correlations for Grade 2 - 1960 were obtained in z-transformations from three correlations and for Grade 3 from two correlations. The means tested for significance with a two-tail test and the formula $t_z = M_z \sqrt{n(N-3)}$, where n is the number of correlations used to compute the means.

[1] The children in a given third grade room had been scattered through the three second grade rooms and these results were obtained for the third grade groupings in both years.

[2] Positive correlations mean that anxiety is directly related to the variables as listed, while for negative correlations anxiety is inversely related to the listed variables.

* $p < .05$.
** $p < .01$.

Table 3

Significant Mean Correlations Between Subjects' TASC Scores and Ratings by Observers and Teachers

Variable[1]	Boys N = 32		Girls N = 36		Children N = 68	
	Grade 2	Grade 3	Grade 2	Grade 3	Grade 2	Grade 3
1. Independent	.32**		-.27**			
2. Hides emotions	.36**		-.22*			
3. Difficulty in communication						
4. Submissive						
5. Cautious	.36**	.27*				
6. Not sensitive			-.29**		-.17*	
7. Unambitious	-.22*				-.20**	
8. Not well liked						
9. Immature	-.31**	-.35**	.20*	.26*		
10. Does not daydream	.23*		.21		.22**	
11. Inactive	.29**					
12. Underachievers	-.30**	-.37**			-.21**	
13. Learns quickly			-.23*			
14. Forgets						
15. Does not pay attention	-.41**	-.40**			-.25**	
16. Weak conscience	-.33**				-.24**	
17. Masculine					-.15*	
18. Not responsible	-.40**	-.35**			-.22**	

Note - The mean correlations for Grade 2 - 1960 were obtained in z-transformations from three correlations and for Grade 3 from two correlations. The means tested for significance with a two-tail test and the formula $t_z = M_z \sqrt{n(N-3)}$, with df = n(N-3), where n is the number of correlations used to compute the means.

[1] Positive correlations mean that anxiety is directly related to the variables as listed, while for negative correlations anxiety is inversely related to the listed variables.

* $p < .05$.
** $p < .01$.

Table 4

Significant Mean Correlations Between Subjects' PEC Scores and Rating by Observers and Teachers

	2nd Grade Groupins[1]					
	Room 1 N = 24		Room 2 N = 19		Room 3 N = 25	
Variable[2]	Grade 2	Grade 3	Grade 2	Grade 3	Grade 2	Grade 3
1. Independent	.37**		-.38**			
2. Hides emotions	.35**	.33*	-.47**	.52**		
3. Difficulty in communicating	.45**	.40*				
4. Submissive	.39**	.36*	-.56**			
5. Cautious	.51**	.43**	-.61**	-.52**	-.35**	
6. Not sensitive	.36**	.37*				
7. Unambitious					.35**	
8. Not well liked					.30*	
9. Immature	-.40**	-.34*	.30*	.41*	.46**	.31*
10. Does not daydream		-.35*				
11. Inactive			-.42**			
12. Underachievers					.41**	
13. Learns quickly					-.25*	
14. Forgetful			.36*	.36*	.34**	.35*
15. Does not pay attention			.37*	.37*	.46**	.37*
16. Weak conscience	-.37**		.37*	.43*	.57**	.35*
17. Masculine			.53**	.40**		
18. Not responsible			.36*		.52**	

Note - The mean correlations for Grade 2 - 1960 were obtained in z-transformations from three correlations and for Grade 3 and Grade 2 - 1961 from two correlations. The means tested for significance with a two-tailed test and the formula, $t_z = \bar{z}\sqrt{n(k-3)}$, with df = n(k-3), where n is the number of correlations used to compute the means.

[1] The children in a given second grade room were scattered through the four third grade rooms and these results were obtained for the second grade groupings in both years.

[2] Positive correlations mean the [illegible] fensiveness is directly related to the variables as listed, while for the negative correlations defensiveness is inversely related to the listed variables.

* $p < .05$.
** $p < .01$.

Table 5

Significant Mean Correlations Between Subjects' DSC Scores and Ratings by Observers and Teachers

3rd Grade Groupings[1]

	Room 4 N = 15		Room 5 N = 17		Room 6 N = 20		Room 7 N = 16	
Variable[2]	Grade 2	Grade 3	Grade 2	Grade 3	Grade 2	Grade 3	Grade 2	Grade 3
1. Independent		.44*						-.42*
2. Hides emotions	.60**			-.47*				
3. Difficulty in communication	.53**	.61**					.33**	
4. Submissive	.46**	.57**	-.30*	-.37*				
5. Cautious	.37*	.55**		-.47*			.42**	
6. Not sensitive			-.32*				.34*	
7. Unambitious								.49*
8. Not well liked								.46*
9. Immature							.39*	
10. Does not daydream								
11. Inactive								
12. Underachievers			-.40*				-.44**	-.47*
13. Learns quickly							.51**	.41*
14. Forgets	.36*	.57**					.42**	.42*
15. Does not pay attention								
16. Weak conscience	.37*	.48**					.45**	
17. Masculine	.49**						.38*	
18. Not responsible				.38*			.40*	

Note - The mean correlations for Grade 2 - 1960 were obtained in 2-transformations from three correlations and for Grade 3 from two correlations. The means tested for significance with a two-tail test and the formula, $t_z = M_z\sqrt{n(N-3)}$, with df = n(N-3), where n is the number of correlations used to compute the means.

[1]The children in a given third grade room had been scattered through the three second grade rooms and these results were obtained for the third grade groupings in both years.

[2]Positive correlations mean that defensiveness is directly related to the variables as listed, while for negative correlations defensiveness is inversely related to the listed variables.

* $p < .05$.
** $p < .01$.

Table 6

Significant Mean Correlations Between Subjects' DSC Scores and Ratings by Observers and Teachers

Variable[1]	Boys N = 32		Girls N = 36		Children N = 68	
	Grade 2	Grade 3	Grade 2	Grade 3	Grade 2	Grade 3
1. Independent						
2. Hides emotions			.23*	.33**	.18*	
3. Difficulty in communicating				.32*		
4. Submissive					.19**	
5. Cauticus					.15*	.23**
6. Not sensitive	.26*		.24*	.41**		
7. Unambitious						
8. Not well liked						
9. Immature				-.27*		-.23*
10. Does not daydream						
11. Inactive				.27*		
12. Underachievers						
13. Learns quickly	-.29**		-.23*	-.30*	-.27**	-.25**
14. Forgets	.31**		.26**	.30*	.30**	.27**
15. Does not pay attention			.26**	.26*	.23**	.19*
16. Weak conscience					.19**	.20*
17. Masculine	.25*		.26**		.29**	.19*
18. Not responsible					.22**	

Note - The mean correlations for Grade 2 - 1960 were obtained in z-transformations from three correlations and for Grade 3 from two correlations. The means tested for significance with a two-tail test and the formula, $t_z = M_z\sqrt{n(N-3)}$, with df = n(N-3), where n is the number of correlations used to compute the means.

[1] Positive correlations mean that defensiveness is directly related to the variables as listed, while for negative correlations defensiveness is inversely related to the listed variables.

* $p < .05$.
** $p < .01$.

Table 7

Frequencies of Positive and Negative Ratings of Observers' Notes

	2nd Grade Teachers						3rd Grade Teachers							
	1		2		3		4		5		6		7	
Variables	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Dependency	18	72	98	16	37	31	22	10	22	34	6	49	19	10
Caution	5	29	40	9	17	16	7	2	9	25	1	25	14	12
Fear of Failure	5	11	24	4	13	7	10	2	13	28	10	32	18	12
Motivations	11	31	24	5	16	19	7	1	10	19	6	20	11	6
Failure, success	16	37	40	1	29	13	13	4	2	40	8	39	12	28
Shyness, anxiety aggression	7	10	29	2	12	26	16	5	5	27	5	40	13	46
Emotion, value judgment	2	33	28	7	2	14	14	6	7	29	7	56	17	28
Total	64	223	283	44	126	126	89	30	68	202	43	261	104	142

Abstract

The present study had two major purposes: (a) to determine the relation of anxiety about school to a wide variety of personality and behavior variables measured in the classroom and (b) to explore the effects of differences in classroom atmosphere upon those relations. In undertaking such a study the Test Anxiety Scale for Children (TASC) and the Defensiveness Scale for Children (DSC) were the major techniques utilized to get at certain self-attitudes. A great deal of research had been done with the TASC which gave a basis to the expectation that it tapped personality variables of obvious relevance to the study of teacher effectiveness. Less research had been done with the DSC but such research had indicated that it should also be incorporated into this study. This study, therefore, could be viewed as an attempt to study teacher behavior in relation to the degree of school anxiety a child reports, as well as in relation to the degree to which a child avoids admitting various negative characteristics. Previous research had indicated that while TASC and DSC were significantly correlated, they nevertheless predicted differentially in certain situations.

In the first year of the present study three second grade classrooms of a North Haven (Connecticut) elementary school were utilized. At the end of the previous year (first grade) the TASC, DSC, and Lorge-Thorndike were administered. All children in these three classrooms were observed over a four-month period beginning the first day of school. Two independent observers were used. After three months both observers rated all children (N = 96) on a personality-behavior check list. In the

subsequent year the children studied in the second grade were followed in a classroom observation study through the third grade to determine the consistency of findings in the previous year, and the effectiveness of the TASC and the DSC as relatively long-range predictors. During the sixth month each third grade teacher rated all of her own pupils on the personality and behavior check list. The observer likewise rated all the children in each classroom on the same check list. In all analyses of third grade data only those children are included for whom all data were available, i.e., TASC and DSC scores obtained at the end of the first grade and observers' and teachers' ratings for both second and third grade.

The following are the major findings:

1. The DSC is a better predictor than the TASC of children's personality and behavior in the classroom.

2. The DSC predicts better for girls than for boys while the reverse tends to be true for the TASC. Compared with the TASC, the DSC is a more stable measure and tends to retain its predictive value regardless of changes in teachers.

3. Teacher-observer agreement about classroom behavior of children tends to be highest for those teachers independently rated as most effective by two clinicians, next highest for average teachers, and lowest for the teachers whose methods were evaluated as least favorable.

4. For the two most effective teachers the TASC scores correlate significantly with ratings by the teachers and the observers for more different variables than the other five teachers for whose classes few significant results were found.

In general, the results point clearly to different personality dynamics for boys and girls in the classroom, to differences in predictive value of the two measures of anxiety and defensiveness, both for boys and girls differentially and for different teachers, and to differences in teacher effectiveness which seem organized around the teachers' values and beliefs. All these suggest the need for intensive study of the meaning and effects of teacher beliefs and values as these affect their own and their pupils' classroom efforts, perhaps in particular as these affect children's anxiety and defensiveness, and boys and girls differentially.